

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### The effect of acetaminophen on ischemia- reperfusion injury in patients with ST segment elevation acute myocardial infarction treated by primary percutaneous coronary intervention

#### Protocol summary

##### Summary

The aim of the current study was to determine the effect of acetaminophen on ischemia- reperfusion injury in patients with ST segment elevation acute myocardial infarction(STEMI) treated by primary percutaneous coronary intervention (pPCI). This study is a double blind randomized clinical trial which its population is all of the patients with STEMI diagnosis. Inclusion criteria include: patient willingness to take part in the study, informed consent, age above 20 and below 65 years and include all patients with STEMI. Exclusion criteria included a history of kidney and liver disease, acute hepatitis, asthma, pregnancy, cardiac output less than 30%, history of heart failure, and consumption of acetaminophen, warfarin, salicylates, barbiturates, carbamazepine, hydantoin and rifampin, rifabutin, isoniazid, alcohol, and antioxidants drugs. A total of 60 patients will be selected among those eligible. Patients were randomly divided in two groups. Before the angioplasty case group receive 1 grams of paracetamol, and then patient hemodynamic parameters and blood biomarker will be checked before and 6 hours after p PCI. Also in order to measure the amount of cellular damage, blood sample will be taken from the coronary of heart before and after p PCI, and in order to evaluate the levels of homocysteine, glutathione and malondialdehyde serum of blood will be kept at -20 C.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2017011828454N3**  
Registration date: **2017-02-11, 1395/11/23**  
Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2017-02-11, 1395/11/23

##### Registrant information

###### Name

Atefeh Asadmobini

###### Name of organization / entity

Kermanshah University of Medical Science,  
Cardiovascular Research Centre

###### Country

Iran (Islamic Republic of)

###### Phone

+98 83 3839 5970

###### Email address

aasadmobini@kums.ac.ir

##### Recruitment status

###### Recruitment complete

##### Funding source

Kermanshah University of Medical Science

##### Expected recruitment start date

2017-02-03, 1395/11/15

##### Expected recruitment end date

2017-08-06, 1396/05/15

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

The effect of acetaminophen on ischemia- reperfusion injury in patients with ST segment elevation acute myocardial infarction treated by primary percutaneous coronary intervention

##### Public title

The effect of acetaminophen on ischemia- reperfusion injury in patients with ST segment elevation acute myocardial infarction treated by primary percutaneous coronary intervention

#### **Purpose**

Treatment

#### **Inclusion/Exclusion criteria**

Inclusion criteria include: patient willingness to take part in the study, informed consent, age above 20 and below 65 years and include all patients with STEMI. Exclusion criteria included a history of kidney and liver disease, acute hepatitis, asthma, pregnancy, cardiac output less than 30%, history of heart failure, and consumption of acetaminophen, warfarin, salicylates, barbiturates, carbamazepine, hydantoin and rifampin, rifabutin, isoniazid, alcohol, and antioxidants drugs.

#### **Age**

From **20 years** old to **65 years** old

#### **Gender**

Both

#### **Phase**

N/A

#### **Groups that have been masked**

*No information*

#### **Sample size**

Target sample size: **60**

#### **Randomization (investigator's opinion)**

Randomized

#### **Randomization description**

#### **Blinding (investigator's opinion)**

Double blinded

#### **Blinding description**

#### **Placebo**

Not used

#### **Assignment**

Single

#### **Other design features**

### **Secondary Ids**

empty

### **Ethics committees**

#### 1

##### **Ethics committee**

###### **Name of ethics committee**

Kermanshah University of medical Sciences

###### **Street address**

Vice Chancellor for Research and Technology-  
Building No. 2- Kermanshah University of medical  
Sciences-

###### **City**

Kermanshah

###### **Postal code**

##### **Approval date**

2016-12-28, 1395/10/08

##### **Ethics committee reference number**

561

### **Health conditions studied**

#### 1

##### **Description of health condition studied**

ST segment elevation acute myocardial infarction

##### **ICD-10 code**

I21

##### **ICD-10 code description**

Acute myocardial infarction

### **Primary outcomes**

#### 1

##### **Description**

homocysteine

##### **Timepoint**

Before and after primarypercutaneous coronary  
intervention

##### **Method of measurement**

Measuring the level of homocysteine in coronary blood  
sample

#### 2

##### **Description**

Glutathione

##### **Timepoint**

Before and after primarypercutaneous coronary  
intervention

##### **Method of measurement**

Measuring the level of Glutathionein coronary blood  
sample

#### 3

##### **Description**

Malondialdehyde

##### **Timepoint**

Before and after primarypercutaneous coronary  
intervention

##### **Method of measurement**

Measuring the level of malondialdehydecoronary blood  
sample

### **Secondary outcomes**

#### 1

##### **Description**

LDH

##### **Timepoint**

Before and six hours after primary precutaneous  
coronary intervention

##### **Method of measurement**

Measuring the level of LDH from peripheral blood serum

#### 2

##### **Description**

Troponine

### Timepoint

Before and six hours after primary percutaneous coronary intervention

### Method of measurement

Measuring the level of troponine from peripheral blood serum

### 3

#### Description

CPK-mb

#### Timepoint

Before and six hours after primary percutaneous coronary intervention

#### Method of measurement

Measuring the level of CPK-mb from peripheral blood serum

### 4

#### Description

CPK

#### Timepoint

Before and six hours after primary percutaneous coronary intervention

#### Method of measurement

Measuring the level of CPK from peripheral blood serum

## Intervention groups

### 1

#### Description

Case group receive 1 gram paracetamol before primary percutaneous coronary intervention

#### Category

Treatment - Drugs

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Imam Ali Hospital

##### Full name of responsible person

##### Street address

##### City

Kermanshah

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Vice Chancellor for Research and Technology,  
Kermanshah University of Medical Sciences

##### Full name of responsible person

Dr Behrooz Hamzeh

##### Street address

Vice Chancellor for Research and Technology of

Kermanshah University of Medical Sciences- Building  
No. 2 - shheed Beheshti Blvd

##### City

Kermanshah

##### Grant name

##### Grant code / Reference number

##### Is the source of funding the same sponsor organization/entity?

Yes

##### Title of funding source

Vice Chancellor for Research and Technology,  
Kermanshah University of Medical Sciences

##### Proportion provided by this source

100

##### Public or private sector

empty

##### Domestic or foreign origin

empty

##### Category of foreign source of funding

empty

##### Country of origin

##### Type of organization providing the funding

empty

## Person responsible for general inquiries

#### Contact

##### Name of organization / entity

Kermanshah University of medical Science

##### Full name of responsible person

Atefeh Asadmobini

##### Position

Master science/Researcher

##### Other areas of specialty/work

##### Street address

Cardiovascular research center-Imam Ali Hospital-  
Shaheed beheshti Blv.

##### City

Kermanshah

##### Postal code

##### Phone

+98 83 3839 5970

##### Fax

##### Email

a.asadmobini@gmail.com

##### Web page address

## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

Kermanshah University of Medical Science

##### Full name of responsible person

Dr Sareh Mohammadi

##### Position

Cardiologist

##### Other areas of specialty/work

##### Street address

Imam Ali Hospital

##### City

Kermanshah

**Postal code**

**Phone**

+98 83 3839 5970

**Fax**

**Email**

sarehonline@yahoo.com

**Web page address**

**Person responsible for updating data**

**Contact**

**Sharing plan**

**Deidentified Individual Participant Data Set (IPD)**

*empty*

**Study Protocol**

*empty*

**Statistical Analysis Plan**

*empty*

**Informed Consent Form**

*empty*

**Clinical Study Report**

*empty*

**Analytic Code**

*empty*

**Data Dictionary**

*empty*